

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P311794

Luminaire Tested: **24FCZ2-70HE-UNV-L82765-S-CP250-W2A-U-6500K**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P311794
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-70HE-UNV-L82765-S-CP250-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB SHEET
Light Source: (336) 6500K TUNABLE CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6571.0 lumens
Efficiency: N/A
Efficacy: 109.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

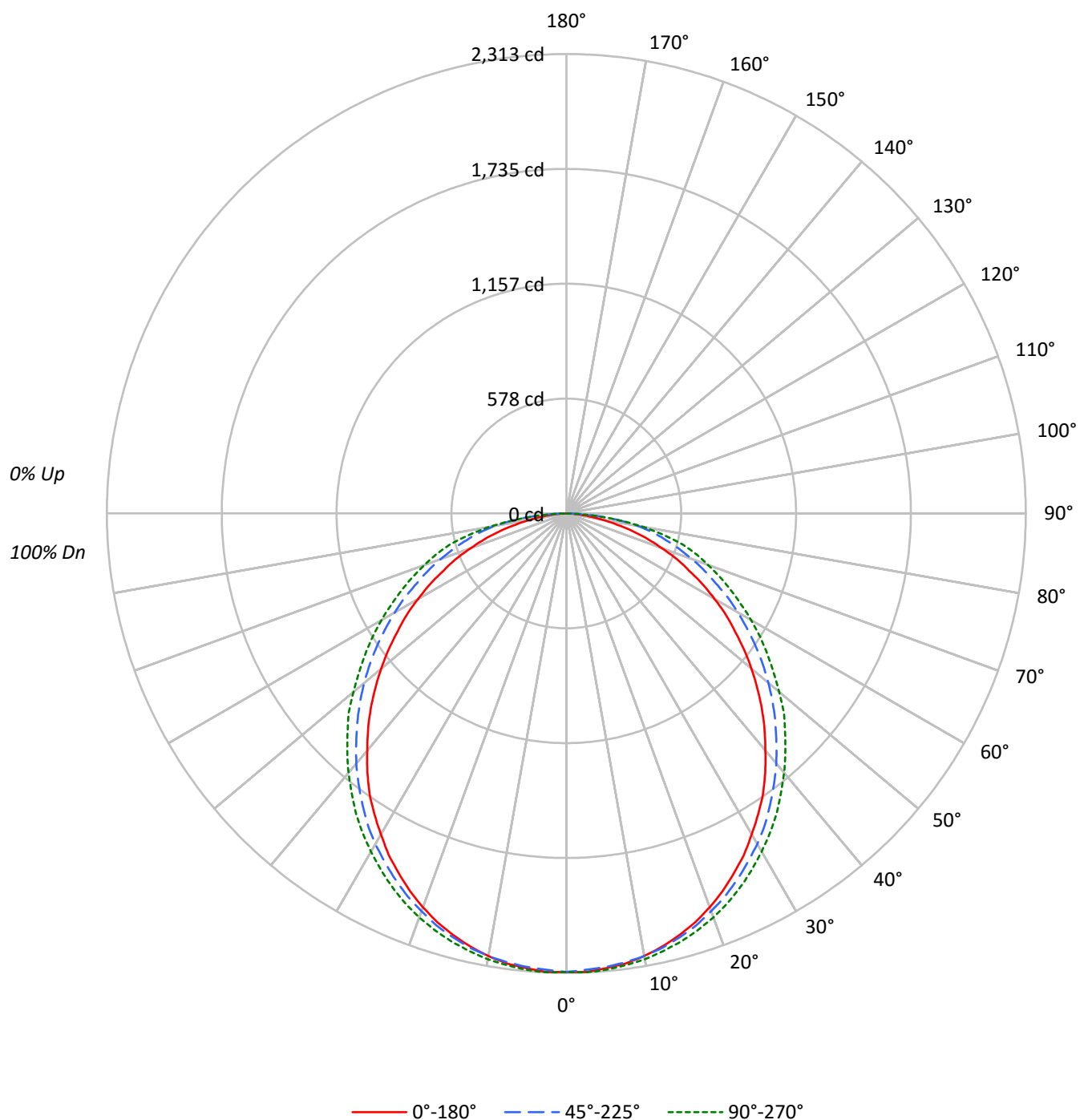
Input Watts (W): 60.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				0
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		0
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		100
1	108	103	99	95	106	101	97	93	97	93	90		93	90	88		83
2	98	90	83	77	96	88	81	76	84	79	74		81	76	72		69
3	89	79	70	64	87	77	69	63	74	67	62		71	66	61		58
4	82	70	61	54	80	68	60	54	66	59	53		63	57	52		49
5	75	62	53	46	73	61	53	46	59	51	46		57	50	45		42
6	70	56	47	40	68	55	47	40	53	46	40		52	45	40		37
7	64	51	42	36	63	50	42	36	48	41	35		47	40	35		33
8	60	46	38	32	58	46	37	32	44	37	32		43	36	31		29
9	56	43	34	29	55	42	34	29	41	34	28		40	33	28		26
10	53	39	31	26	51	39	31	26	38	31	26		37	30	26		24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3106	3106	3106
5°	3104	3095	3115
10°	3091	3091	3114
15°	3061	3076	3108
20°	3021	3051	3099
25°	2965	3021	3080
30°	2899	2987	3055
35°	2835	2938	3031
40°	2738	2889	2995
45°	2649	2832	2963
50°	2547	2779	2927
55°	2433	2727	2898
60°	2320	2685	2893
65°	2173	2638	2911
70°	2012	2652	2989
75°	1801	2702	3158
80°	1455	2862	3089
85°	1096	2513	2448



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	218.5	3.3
10°-20°	624.5	9.5
20°-30°	938.7	14.3
30°-40°	1118.1	17.0
40°-50°	1144.4	17.4
50°-60°	1030.3	15.7
60°-70°	809.1	12.3
70°-80°	525.1	8.0
80°-90°	162.4	2.5
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1781.7	27.1
0°-40°	2899.8	44.1
0°-60°	5074.4	77.2
0°-90°	6571.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6571.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2308	2308	2308	2308	2308	
5°	2298	2302	2292	2304	2306	218
15°	2198	2204	2208	2227	2231	620
25°	1997	2014	2035	2068	2075	920
35°	1726	1747	1789	1833	1845	1077
45°	1392	1426	1488	1544	1557	1073
55°	1037	1083	1163	1223	1236	930
65°	682	735	829	898	914	679
75°	346	413	520	591	607	367
85°	71	132	163	159	159	86
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2308.4	2308.4	2308.4	2308.4	2308.4
2.5°	2310.5	2310.5	2300.1	2310.5	2312.6
5°	2298.0	2302.2	2291.7	2304.3	2306.3
7.5°	2285.5	2285.5	2279.2	2291.7	2293.8
10°	2262.5	2264.6	2262.5	2277.1	2279.2
12.5°	2233.3	2237.5	2239.6	2254.2	2256.3
15°	2197.8	2204.1	2208.2	2227.0	2231.2
17.5°	2158.2	2164.4	2174.9	2195.7	2199.9
20°	2110.2	2118.5	2131.0	2158.2	2164.4
22.5°	2058.0	2066.3	2087.2	2112.2	2122.7
25°	1997.4	2014.1	2035.0	2068.4	2074.7
27.5°	1936.9	1951.5	1978.7	2014.1	2022.5
30°	1866.0	1888.9	1922.3	1957.8	1966.1
32.5°	1797.1	1820.0	1859.7	1897.3	1907.7
35°	1726.1	1747.0	1788.7	1832.6	1845.1
37.5°	1644.7	1671.8	1717.8	1761.6	1774.1
40°	1559.1	1592.5	1644.7	1690.6	1705.2
42.5°	1477.7	1513.2	1565.4	1615.5	1632.2
45°	1392.2	1425.6	1488.2	1544.5	1557.0
47.5°	1304.5	1342.1	1408.9	1465.2	1486.1
50°	1216.8	1256.5	1327.5	1385.9	1398.4
52.5°	1129.2	1170.9	1246.1	1308.7	1314.9
55°	1037.3	1083.3	1162.6	1223.1	1235.6
57.5°	953.8	993.5	1079.1	1141.7	1156.3
60°	862.0	905.8	997.7	1056.1	1074.9
62.5°	774.3	820.3	916.3	974.7	991.4
65°	682.5	734.7	828.6	897.5	914.2
67.5°	603.2	653.3	753.5	820.3	837.0
70°	511.4	567.7	674.2	743.0	759.7
72.5°	432.0	490.5	596.9	663.7	688.8
75°	346.5	413.3	519.7	590.7	607.4
77.5°	263.0	340.2	448.7	503.0	503.0
80°	187.8	269.2	369.4	394.5	398.7
82.5°	123.1	202.5	273.4	271.3	271.3
85°	71.0	131.5	162.8	158.6	158.6
87.5°	27.1	54.3	58.4	58.4	56.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)